

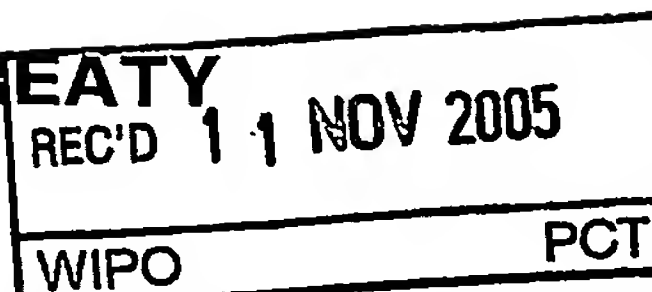
# PATENT COOPERATION TREATY


# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference RSJ07869WO		<b>FOR FURTHER ACTION</b>		See Form PCT/PEA/416
International application No. PCT/GB2004/003454		International filing date (day/month/year) 12.08.2004		Priority date (day/month/year) 13.08.2003
International Patent Classification (IPC) or national classification and IPC G01N27/49				
Applicant CITY TECHNOLOGY LIMITED et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand  07.03.2005		Date of completion of this report  10.11.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer  Purdie, D  Telephone No. +49 89 2399-2187		



# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/GB2004/003454

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## Box No. I Basis of the report

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
    - ☐ international search (under Rules 12.3 and 23.1(b))
    - ☐ publication of the international application (under Rule 12.4)
    - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

### Description, Pages

1-14 as originally filed

### Claims, Numbers

1-21 as originally filed

### Drawings, Sheets

1/6-6/6 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
  - ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing *(specify)*:
  - ☐ any table(s) related to sequence listing *(specify)*:
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
  - ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing *(specify)*:
  - ☐ any table(s) related to sequence listing *(specify)*:

\* If item 4 applies, some or all of these sheets may be marked "superseded."

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**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

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1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 1-12,20,21

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for the said claims Nos. 1-12,20,21

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☐ See separate sheet for further details

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	16,18
	No: Claims	13-15,17,19
Inventive step (IS)	Yes: Claims	
	No: Claims	13-19
Industrial applicability (IA)	Yes: Claims	13-19
	No: Claims	

**2. Citations and explanations (Rule 70.7):**

**see separate sheet**

**Re Item V.**

The following document is referred to in this communication:

D1: WO-A-01 81911

The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 13 is not new in the sense of Article 33(2) PCT.

Document D1 discloses an electrochemical gas sensor comprising the following features:

- a housing (housing component 65: see Fig. 1) having a wall and a plurality of connection apertures through said wall (holes 61: see Fig. 1), said apertures having bores (see Fig. 1);
- sensing and counter electrodes housed in the housing (p9, lines 16-20);
- a liquid electrolyte contained in the housing in chemical contact with the electrodes (p10, lines 13-18);
- a plurality of current collectors (pin 50: see Fig. 1) in electrical contact with respective ones of the respective electrodes (p9, lines 26-33);

Each of the current collectors is adapted for direct contact with one of the sensor's electrodes (p9, lines 26-33: "direct contact" is taken to mean direct electrical contact). A compliant seal is present (o-ring 100: see Fig. 1), adapted to fit in one of the connection apertures, the current collector extending through the compliant seal (see Fig. 2). The seal is in contact with the current collector substantially throughout its length along the current collector (see Fig. 2) and is of an elastomeric material (p10, line 36). The arrangement is such that compressive stress induced in the seal by reaction from the connection aperture urges the seal into distributed sealing contact with the current collector substantially throughout the length of the seal (p10, line 36 - p11, line 17).

The current collectors of the electrochemical gas sensor disclosed in D1 extend within their seals through respective ones of the apertures from their electrodes to outside their housing (see Fig. 2). The compliant seals are in compression against both their current collectors and at least part of the bores of their apertures, whereby the current collectors provide means for electrical contact outside the housing and the apertures are sealed (p10, line 36 - p11, line 17).

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(SEPARATE SHEET)**

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Claim 13 is thus not novel with respect to D1.

The further features of claims 14-16, which would appear to be dependent on claim 13 rather than on claim 12, appear to be either known from the prior art (claims 14 and 15) or contain design features with no inventive merit (claim 16).

The only feature of claim 13 which is not explicitly present in the wording of claim 17 is the extension of the current collectors through their apertures within their seals. This feature would however appear to be present in claim 1 ("the current collector extending through the compliant seal"), all the features of which are apparently part of claim 17. Thus, it would appear that claim 17 does include all the features of claim 13 and should therefore be dependent on that claim (Rule 6.4 PCT).

With further reference to claim 17, the location of current collectors "preliminarily" would appear to refer to a method and not to an apparatus and for this reason apparatus claim 17 is unclear. This lack of clarity notwithstanding, claim 17 does not seem to offer any features which render the subject-matter of the claim novel (see D1, p11, line 8 - p12, line 28).

The additional features of claim 18 would appear to be standard design options.

Claim 19 is not novel.

The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).